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**west virginia** department of environmental protection

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Office of Oil and Gas  
601 57th Street SE  
Charleston, WV 25304  
(304) 926-0450  
(304) 926-0452 fax

Earl Ray Tomblin, Governor  
Randy C. Huffman, Cabinet Secretary  
[www.dep.wv.gov](http://www.dep.wv.gov)

December 30, 2013

**WELL WORK PERMIT**

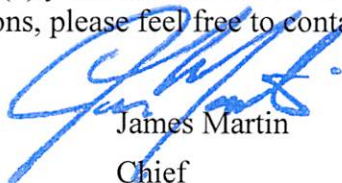
**Horizontal 6A Well**

This permit, API Well Number: 47-9502133, issued to JAY-BEE OIL & GAS, is evidence of permission granted to perform the specified well work at the location described on the attached pages and located on the attached plat, subject to the provisions of Chapter 22 of the West Virginia Code of 1931, as amended, and all rules and regulations promulgated thereunder, and to all conditions and provisions outlined in the pages attached hereto. Notification shall be given by the operator to the Oil and Gas Inspector at least 24 hours prior to the construction of roads, locations, and/or pits for any permitted work. In addition, the well operator shall notify the same inspector 24 hours before any actual well work is commenced and prior to running and cementing casing. Spills or emergency discharges must be promptly reported by the operator to 1-800-642-3074 and to the Oil and Gas inspector.

Please be advised that form WR-35, Well Operators Report of Well Work is to be submitted to this office within 90 days completion of permitted well work, as should form WR-34 Discharge Monitoring Report within 30 days of discharge of pits, if applicable. Failure to abide by all statutory and regulatory provisions governing all duties and operations hereunder may result in suspension or revocation of this permit and, in addition, may result in civil and/or criminal penalties being imposed upon the operators.

In addition to the applicable requirements of this permit, and the statutes and rules governing oil and gas activity in WV, this permit may contain specific conditions which must be followed. Permit conditions are attached to this cover letter.

Per 35CSR-4-5.2.g this permit will expire in two (2) years from the issue date unless permitted well work is commenced. If there are any questions, please feel free to contact me at (304) 926-0499 ext. 1654.



James Martin  
Chief

Operator's Well No: BASHFUL 6  
Farm Name: TIPPINS, RODNEY & VICKIE , HE  
**API Well Number: 47-9502133**  
**Permit Type: Horizontal 6A Well**  
Date Issued: 12/30/2013

**Promoting a healthy environment.**


# PERMIT CONDITIONS

West Virginia Code § 22-6A-8(d) allows the Office of Oil and Gas to place specific conditions upon this permit. Permit conditions have the same effect as law. Failure to adhere to the specified permit conditions may result in enforcement action.

## CONDITIONS

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1. Operator shall install additional casing to existing gas well API: 47-095-02143 to raise the well head a minimum of 3' above the constructed pad elevation, reinstall well head, and add a tag labeling the well with API#.
2. This proposed activity may require permit coverage from the United States Army Corps of Engineers (USACOE). Through this permit, you are hereby being advised to consult with USACOE regarding this proposed activity.
3. If the operator encounters an unanticipated void, or an anticipated void at an unanticipated depth, the operator shall notify the inspector within 24 hours. Modifications to the casing program may be necessary to comply with W. Va. Code § 22-6A-5a (12), which requires drilling to a minimum depth of thirty feet below the bottom of the void, and installing a minimum of twenty (20) feet of casing. Under no circumstance should the operator drill more than fifty (50) feet below the bottom of the void or install less than twenty (20) feet of casing below the bottom of the void.
4. When compacting fills, each lift before compaction shall not be more than 12 inches in height, and the moisture content of the fill material shall be within limits as determined by the Standard Proctor Density test of the actual soils used in specific engineered fill, ASTM D698, Standard Test Method for Laboratory Compaction Characteristics of Soil Using Standard Effort, to achieve 95 % compaction of the optimum density. Each lift shall be tested for compaction, with a minimum of two tests per lift per acre of fill. All test results shall be maintained on site and available for review.
5. Operator shall install signage per § 22-6A-8g (6) (B) at all source water locations included in their approved water management plan within 24 hours of water management plan activation.
6. Oil and gas water supply wells will be registered with the Office of Oil and Gas and all such wells will be constructed and plugged in accordance with the standards of the Bureau for Public Health set forth in its Legislative rule entitled *Water Well Regulations*, 64 C.S.R. 19. Operator is to contact the Bureau of Public Health regarding permit requirements. In lieu of plugging, the operator may transfer the well to the surface owner upon agreement of the parties. All drinking water wells within fifteen hundred feet of the water supply well shall be flow tested by the operator upon request of the drinking well owner prior to operating the water supply well.
7. Pursuant to the requirements pertaining to the sampling of domestic water supply wells/springs the operator shall, no later than thirty (30) days after receipt of analytical data provide a written copy to the Chief and any of the users who may have requested such analyses.
8. If any explosion or other accident causing loss of life or serious personal injury occurs in or about a well or well work on a well, the well operator or its contractor shall give notice, stating the particulars of the explosion or accident, to the oil and gas inspector and the Chief, within 24 hours of said accident.
9. During the casing and cementing process, in the event cement does not return to the surface, the oil and gas inspector shall be notified within 24 hours.




	<b>Applicant: JAY BEE OIL &amp; GAS</b> <b>Reference ID: Bashful 6 (09/26/2013)</b> <b>Status: New</b>	<b>Type: Horizontal 6A Well</b> <b>Permit ID: New/Pending</b> <b>Printed: Dec. 17, 2013 9:16 AM</b>
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**WW-6B: General and Location Information**

API Number:	<input type="text" value="95-02133"/>	(47-____-____)
Operator's Well Number:	<input type="text" value="Bashful 6"/>	
Filing Fee:	<input checked="" type="radio"/> First Well on Pad <input type="radio"/> Subsequent Well on Pad	<input type="text" value="10,150.00"/>
Well Pad Name:	<input type="text" value="Bashful (T3029) Pad"/>	
Surface Owner:	<input type="text" value="Rodney &amp; Vicky Tippins / Eli Tippins"/>	
Public Road Access:	<input type="text" value="Bonelick Rd"/>	

Please attach each of the following as seperate documents:

- Well Plat
- Wellbore Schematic

County:	<input type="text" value="Tyler"/>	District:	<input type="text" value="McElroy"/>			
Quadrangle:	<input type="text" value="CENTER POINT"/>					
Top Hole(UTM NAD83):						
Easting:	<input type="text" value="523988.1"/>	Northing:	<input type="text" value="4369314"/>	Zone:	<input type="text" value="17"/>	
Proposed Landing Point(UTM):						
Easting:	<input type="text" value="523528.6"/>	Northing:	<input type="text" value="4369192.2"/>	Zone:	<input type="text" value="17"/>	
Proposed Bottom Hole(UTM):						
Easting:	<input type="text" value="522604.7"/>	Northing:	<input type="text" value="4370700.8"/>	Zone:	<input type="text" value="17"/>	
Elevations (feet) -- Current Ground: <input type="text" value="1214.74"/> Proposed Post-Construction: <input type="text" value="1201.86"/>						

Well Type:	<input checked="" type="radio"/> Gas <input type="radio"/> Oil
	<input type="radio"/> Underground Storage <input type="radio"/> Other <input type="text" value=""/>
Will well be drilled more than 100 feet into the Onondaga Group? <input type="radio"/> Yes <input checked="" type="radio"/> No	
Depth Type:	<input checked="" type="radio"/> Shallow <input type="radio"/> Deep
Existing Pad?	<input type="radio"/> Yes <input checked="" type="radio"/> No

**Target Formations**

Complete the following table.

Target Formation	Depth-Top (ft)	Anticipated Thickness (ft)	Associated Pressure (psi)
Marcellus	8400	40	3500

**Depth Specifics**

Proposed Post-Construction Elevation: 1201.86

Proposed Total Vertical Depth: 8400 (ft.)

Formation at Total Vertical Depth: Marcellus

Proposed Total Measured Depth: 16000 (ft.)

Proposed Total Horizontal Leg Length: 7600 (ft.)

Method to Determine Fresh Water Depth:

Well Record API 47-095-00388 (used for both the fresh and saltwater depths.)

## Approximate Fresh Water Strata Depths

282 (ft.)

## Approximate Coal Seam Depths

461 (ft.) Coal Seam Name, if known: Unknown

930 (ft.) Coal Seam Name, if known: Pittsburgh

## Approximate Depth to Possible Void(coal mine, karst, other)

(ft.)

Not Anticipated: ☐

## Approximate Saltwater Depths

(ft.)

**Well Work and Mine Details**

Is proposed well location directly overlying or tributary to an active mine?

☐ Yes ☒ No

If Yes, indicate name, depth, coal seam and owner of mine:

Coal Seam:  Depth:   
 Mine Name:  Owner:

Describe proposed well work, including the drilling and plugging back of any pilot hole.

Drill and Stimulate a new Horizontal Well. Using a top hole rig, we will drill top hole to kick off point by drilling the conductor, freshwater and intermediate holes. Using a directional rig we will drill the production holes.

Describe fracturing/stimulating methods in detail, including anticipated max pressure and anticipated max rate.

300-350' per stage 8,500bbls of water, 150,000-400,000lbs of sand, friction reducer, 1# per gallon, scale inhibitor and bacteria prevention 1/4# per gallon 2000 gallons 15% vol acid.

Total area to be disturbed, including roads, stockpile area, pits, etc, (acres):

Area to be disturbed for well pad only, less access road (acres):

### Casing and Cementing

Complete the following table, adding as many rows of each **Type** as needed.

Type	Size (in)	New or Used	Grade	Weight per ft. (lb/ft)	Footage: For Drilling	Intervals: Left in Well
Conductor <input type="text"/>	16	New	J55	40	40	40
	Wellbore Diameter (in)		Wall Thickness (in)		Burst Pressure (psi)	
	17.5		.495		3000	
	Cement Type		Yield (cu. ft./sk)	Fillup - Cubic Feet	Top of Cement	Circulated to Surface?
	Class A Cement		1.19	98.3	0	<input checked="" type="checkbox"/>
Type	Size (in)	New or Used	Grade	Weight per ft. (lb/ft)	Footage: For Drilling	Intervals: Left in Well
Fresh Water <input type="text"/>	11 3/4	New	J55	32	332	332
	Wellbore Diameter (in)		Wall Thickness (in)		Burst Pressure (psi)	
	15		.333		1500	
	Cement Type		Yield (cu. ft./sk)	Fillup - Cubic Feet	Top of Cement	Circulated to Surface?
	Class A Cement		1.26	157.21	0	<input checked="" type="checkbox"/>

Type	Size (in)	New or Used	Grade	Weight per ft. (lb/ft)	Footage: For Drilling	Intervals: Left in Well
Intermediate ▾	8 5/8	New	J55	24	2000	2000
Wellbore Diameter (in)		Wall Thickness (in)		Burst Pressure (psi)		
11		.264		2500		
Cement Type		Yield (cu. ft./sk)	Fillup - Cubic Feet		Top of Cement	Circulated to Surface?
Class A Cement		1.45	505.3		0	<input checked="" type="checkbox"/>
Type	Size (in)	New or Used	Grade	Weight per ft. (lb/ft)	Footage: For Drilling	Intervals: Left in Well
Production ▾	5 1/2	New	P110	17	16000	16000
Wellbore Diameter (in)		Wall Thickness (in)		Burst Pressure (psi)		
7 7/8		.304		15000		
Cement Type		Yield (cu. ft./sk)	Fillup - Cubic Feet		Top of Cement	Circulated to Surface?
Type 1 Cement		1.34	2768		1000	<input type="checkbox"/>

**Packers**Will Packers be Used? ☐ Yes ☒ No

If Yes, complete the following:

Kind	Sizes	Depths Set

**Fluids, Cuttings Disposal and Reclamation Plan**State: West VirginiaCounty: TylerDistrict: 05Quadrangle: CENTER POINTZone: 17Northing: 4369314Easting: 523988.1API Number: 95-02133Operator Well Number: Bashful 6

Do you anticipate drilling/redrilling well work?

☒ Yes ☐ NoWill a pit be used for plugging activities? ☒ Yes ☐ No

If so, please describe anticipated pit waste:

Drill Cuttings - Air DrillingWill a synthetic liner be used in the pit? ☒ Yes ☐ NoIf so, what ml.? 60

Proposed Disposal Method For Treated Pit Waste Water:

- ☒ Underground Injection ( UIC Permit Number  )
- ☐ Reuse (at API Number  )
- ☒ Other (explain)

Will closed loop system be used? ☒ Yes ☐ No

If so, describe:

Drilling medium anticipated for this well (vertical and horizontal)? Air, freshwater, oil based, etc.

If oil based, what type? Synthetic, petroleum, etc.

Additives to be used in drilling medium?

Drill cuttings disposal method?

- ☐ Leave in Pit (medium used)  Explain:
- ☐ Landfill (name/permit number?)
- ☐ Removed Offsite (name/permit number?)
- ☐ Other: (please explain)

Proposed Revegetation Treatment:

Acres Disturbed:

Prevegetation pH:

Lime Tons/acre to correct to pH:

Fertilizer (10-20-20 or equivalent):  lbs/acre

Mulch  lbs/acre

Comments:

Seed Mixtures

Area Type	Seed Type	lbs/acre

Permanent ▼	KY-31	20
Permanent ▼	Creeping Red Fescue	30
Permanent ▼	Lathco Flat Pea/Perennial Ryegrass	30
Temporary ▼	Annual Ryegrass	40



**Describe proposed borehole conditioning procedures.**

Air Hole: 15" hole for the 11 3/4 fresh water case - Circulate until clean with air. If soaping, slug then dry.  
Air Hole: 11" hole for the 8 5/8 intermediate base - Circulate until clean with air. If soaping, slug then dry.  
7 7/8" hole for the 5 1/2 production case - Circulate with mud and sweeps for two times bottoms up.  
If needed weight up mud until no cuttings retrieved, then circulate with mud and sweeps for two times bottoms up.

**Centralizers Type and Placement.**

Vertical - Every 500' Bow Centralizer, and 50' from top of ground. Horizontal every 42' Spiral Centralizer, Curve - Every 84' Spiral Centralizer.

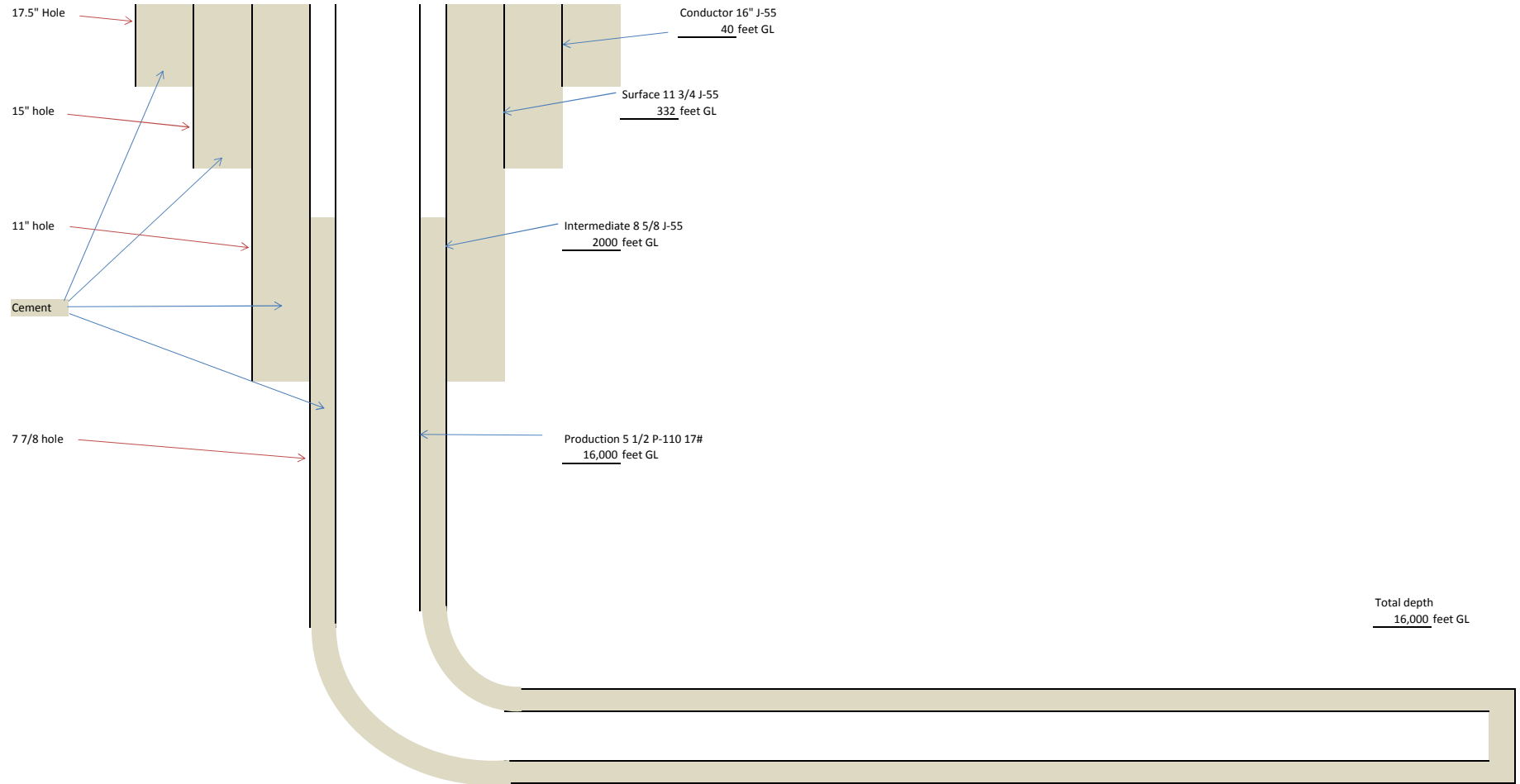
**Cement Additives.**

Superior Well Services - 15" hole for the 11 3/4 fresh water case, Class A Cement, 2% Calcium Chloride, 1/4# flake.  
Superior Well Services - 11" hole for the 8 5/8 intermediate base, Class A Cement, 2% Calcium Chloride  
Baker Hughes - 7 7/8" hole for the 5 1/2 production case, Type 1 Cement, Fly Ash, Barite, Finetol 300L, R-3 Celio Flake, Sugar, CD-32, FL-62

Jay-Bee Oil & Gas Inc.  
Well Name Bashful 6  
GL Elevation 1,201.86'  
KB 14 feet

Date 10/11/2013  
District McElroy  
County Tyler  
State West Virginia

Input by: Shane Dowell



**JAY –BEE OIL & GAS INC**  
**3570 SHIELDS HILL RD**  
**CAIRO, WV 26337**  
**OFFICE (304) 628-3111**  
**FAX (304) 628-3107**

**WELL SITE DRILLING PROCEDURES AND SITE SAFETY PLAN**  
**Per 35CSR8/§22-6A**

(Any changes or modifications to previously approved plans must be approved by the West Virginia Department of Environmental Protection - Office of Oil and Gas)

A copy of this plan will be provided to the local emergency planning committee or county emergency services offices at least 7 days prior to land disturbance from well work.

**SITING STANDARDS**

<b>Well Name</b>	Bashful 6
<b>Well Pad</b>	Bashful (T3029) Pad
<b>Latitude/Longitude</b>	NAD83- Lat. 39.4730804 Long. -80.7211082
<b>Location of Access Road</b>	From Indian Creek Rd (Mile Point 6), 2 miles north on Walnut Fork, 1.2 east miles on Bonelick Rd.
<b>Detail of Actual Well Work</b>	Drill and Stimulate a New Horizontal Well.
<b>Detail of Completion and Production Activities</b>	<u><b>Fracturing/ Stimulating Methods</b></u> 300-350' per stage 8,500bbls of water, 150,000 – 400,000lbs of sand, friction reducer, 1# per gallon, scale inhibitor, and bacteria prevention ¼# per gallon 2000 gallons 15% vol acid.
<b>Directions to Well</b>	From Middlebourne city center, head south down WV 18 for 6.7 miles. Turn left onto Indian Creek Rd, and follow east for 6 miles. Turn left onto Walnut Fork and follow north for 2 miles. Turn right onto Bonelick Rd . Follow east for 1.2 miles to lease road on left.
<b>Prevailing Wind Direction</b>	South/ South East



## Water Management Plan: Primary Water Sources



WMP-01657

API/ID Number: 047-095-02133

Operator:

Jay-Bee Oil & Gas, Inc.

Bashful 6

### Important:

For each proposed primary water source (including source intakes for purchased water sources) identified in your water management plan, and summarized herein, DEP has made an evaluation concerning water availability over the specified date range. DEP's assessment is based on the following considerations:

- Statistical analysis of historical USGS stream gauge data (transferred to un-gauged locations as necessary);
- Identification of sensitive aquatic life (endangered species, mussels, etc.);
- Quantification of known existing demands on the water supply (Large Quantity Users);
- Minimum flows required by the Army Corps of Engineers; and
- Designated stream uses.

Based on these factors, DEP has provided, for each intake location (and origination point for purchased water), a reference gauge location and discharge flow reading which must be surpassed prior to withdrawals. Additionally, DEP has established a minimum passby flow at the withdrawal location which must also be surpassed prior to withdrawals. These thresholds are considered terms of the permit and are enforceable as such.

DEP is aware that some intake points will be used for multiple wells and well sites. In these cases, the thresholds set by the Water Management Plan are to be interpreted as total withdrawal limits for each location over the specified date range regardless of how many wells are supported by that intake.

For all purchased water intakes, determinations of water availability are made at the original source intake location. It is the responsibility of the Oil and Gas Operator, not the seller, to cease withdrawal of water from the seller when flows are less than the minimum gauge reading at the stream gauge referenced by the Water Management Plan in order to protect stream uses.

Note that the determinations made herein are based on the best available data, but it is impossible to predict water availability in the future. While the DEP has carefully established these minimum withdrawal thresholds, it remains the operator's responsibility to protect aquatic life at all times. Approval to withdrawal is contingent upon permission from the land owner. It is the responsibility of the operator to secure and maintain permission prior to any withdrawals.

The operator is reminded that 24-48 hours prior to withdrawing (or purchasing) water, DEP must be notified by email at [DEP.water.use@wv.gov](mailto:DEP.water.use@wv.gov).

APPROVED DEC 16 2013



### Source Summary

WMP-01657

API Number:

047-095-02133

Operator:

Jay-Bee Oil &amp; Gas, Inc.

Bashful 6

## Stream/River

● Source **Walnut Fork @ Thomas Withdrawal Site** Tyler Owner: **Doug Thomas**

Start Date	End Date	Total Volume (gal)	Max. daily purchase (gal)	Intake Latitude:	Intake Longitude:
3/1/2014	3/1/2015	7,854,000		39.467133	-80.73614

☐ Regulated Stream? Ref. Gauge ID: 3114500 MIDDLE ISLAND CREEK AT LITTLE, WV

Max. Pump rate (gpm): **5,260** Min. Gauge Reading (cfs): **79.22** Min. Passby (cfs) **0.39**

DEP Comments:

● Source **UNT of Bonelick Run @ Tippins Withdrawal Site** Tyler Owner: **Rodney & Vickie Tippins**

Start Date	End Date	Total Volume (gal)	Max. daily purchase (gal)	Intake Latitude:	Intake Longitude:
3/1/2014	3/1/2015	7,854,000		39.470047	-80.72647

☐ Regulated Stream? Ref. Gauge ID: 3114500 MIDDLE ISLAND CREEK AT LITTLE, WV

Max. Pump rate (gpm): **5,260** Min. Gauge Reading (cfs): **79.22** Min. Passby (cfs) **0.05**

DEP Comments:

## Source Detail

WMP- 01657

API/ID Number: 047-095-02133

Operator: Jay-Bee Oil &amp; Gas, Inc.

Bashful 6

Source ID: 31651 Source Name Walnut Fork @ Thomas Withdrawal Site  
Doug Thomas

Source Latitude: 39.467133

Source Longitude: -80.73614

HUC-8 Code: 5030201

Drainage Area (sq. mi.): 2.6 County: Tyler

Anticipated withdrawal start date: 3/1/2014

Anticipated withdrawal end date: 3/1/2015

Total Volume from Source (gal): 7,854,000

Max. Pump rate (gpm): 5,260

Max. Simultaneous Trucks: 3

Max. Truck pump rate (gpm) 420

- ☐ Endangered Species? ☐ Mussel Stream?  
☐ Trout Stream? ☐ Tier 3?  
☐ Regulated Stream?  
☐ Proximate PSD?  
☐ Gauged Stream?

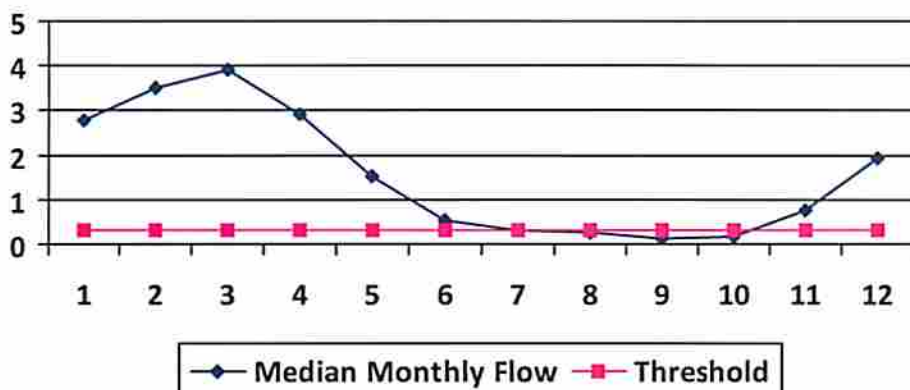
Reference Gaug 3114500 MIDDLE ISLAND CREEK AT LITTLE, WV

Drainage Area (sq. mi.) 458.00

Gauge Threshold (cfs): 45

Month	Median monthly flow (cfs)	Threshold (+ pump)	Estimated Available water (cfs)
1	2.79	12.10	-9.06
2	3.51	12.10	-8.34
3	3.92	12.10	-7.92
4	2.91	12.10	-8.93
5	1.54	12.10	-10.31
6	0.54	12.10	-11.31
7	0.30	12.10	-11.54
8	0.25	12.10	-11.60
9	0.13	12.10	-11.72
10	0.16	12.10	-11.69
11	0.79	12.10	-11.06
12	1.92	12.10	-9.93

### Water Availability Profile



### Water Availability Assessment of Location

Base Threshold (cfs): 0.26

Upstream Demand (cfs): 0.00

Downstream Demand (cfs): 0.00

Pump rate (cfs): 11.72

Headwater Safety (cfs): 0.06

Ungauged Stream Safety (cfs): 0.06

Min. Gauge Reading (cfs): 79.22

Passby at Location (cfs): 0.38

"Threshold", as depicted in the chart above is meant only to indicate the calculated base threshold at the proposed withdrawal location. This value does not include the proposed pump rate or existing demand on the stream. Refer to the monthly breakdown above for a more complete estimation of water availability by month.

## Source Detail

WMP- 01657

API/ID Number: 047-095-02133

Operator: Jay-Bee Oil &amp; Gas, Inc.

Bashful 6

Source ID: 31652 Source Name: UNT of Bonelick Run @ Tippins Withdrawal Site  
Rodney & Vickie Tippins

Source Latitude: 39.470047

Source Longitude: -80.72647

HUC-8 Code: 5030201

Drainage Area (sq. mi.): 0.28 County: Tyler

Anticipated withdrawal start date: 3/1/2014

Anticipated withdrawal end date: 3/1/2015

Total Volume from Source (gal): 7,854,000

Max. Pump rate (gpm): 5,260

Max. Simultaneous Trucks: 3

Max. Truck pump rate (gpm): 420

- ☐ Endangered Species? ☐ Mussel Stream?  
☐ Trout Stream? ☐ Tier 3?  
☐ Regulated Stream?  
☐ Proximate PSD?  
☐ Gauged Stream?

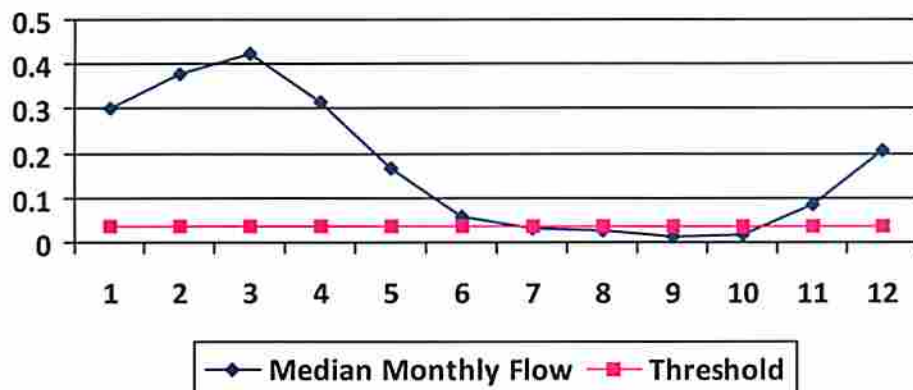
Reference Gaug 3114500 MIDDLE ISLAND CREEK AT LITTLE, WV

Drainage Area (sq. mi.) 458.00

Gauge Threshold (cfs): 45

Month	Median monthly flow (cfs)	Threshold (+ pump)	Estimated Available water (cfs)
1	0.30	11.76	-11.43
2	0.38	11.76	-11.36
3	0.42	11.76	-11.31
4	0.31	11.76	-11.42
5	0.17	11.76	-11.57
6	0.06	11.76	-11.68
7	0.03	11.76	-11.70
8	0.03	11.76	-11.71
9	0.01	11.76	-11.72
10	0.02	11.76	-11.72
11	0.08	11.76	-11.65
12	0.21	11.76	-11.53

## Water Availability Profile



## Water Availability Assessment of Location

Base Threshold (cfs): 0.03

Upstream Demand (cfs): 0.00

Downstream Demand (cfs): 0.00

Pump rate (cfs): 11.72

Headwater Safety (cfs): 0.01

Ungauged Stream Safety (cfs): 0.01

Min. Gauge Reading (cfs): 79.22

Passby at Location (cfs): 0.04

"Threshold", as depicted in the chart above is meant only to indicate the calculated base threshold at the proposed withdrawal location. This value does not include the proposed pump rate or existing demand on the stream. Refer to the monthly breakdown above for a more complete estimation of water availability by month.





## Water Management Plan: Secondary Water Sources



WMP-01657

API/ID Number

047-095-02133

Operator:

Jay-Bee Oil &amp; Gas, Inc.

Bashful 6

### Important:

For each proposed secondary water source identified in your water management plan (i.e., groundwater well, lake/reservoir, recycled frac water, multi-site impoundment, out-of-state source), DEP makes no estimation of the availability of water. These sources may prove to be unsuitable water supplies. Please review the following notes:

- For groundwater supply wells, DEP recommends that the operator contact the local health department prior to drilling any new well; and reminds the operator that all drinking water wells within 1,500 feet of a water supply well shall be flow- and quality-tested by the operator at the request of the drinking well owner prior to operation of the water supply well.
- For each proposed multi-site impoundment water source identified in your water management plan (if applicable), DEP will review the withdrawal limits established in the referenced Water Management Plan for current suitability and provide to the operator these limits for each identified intake. Note that withdrawal limits may be modified as necessary based on changing demands upon that water supply.

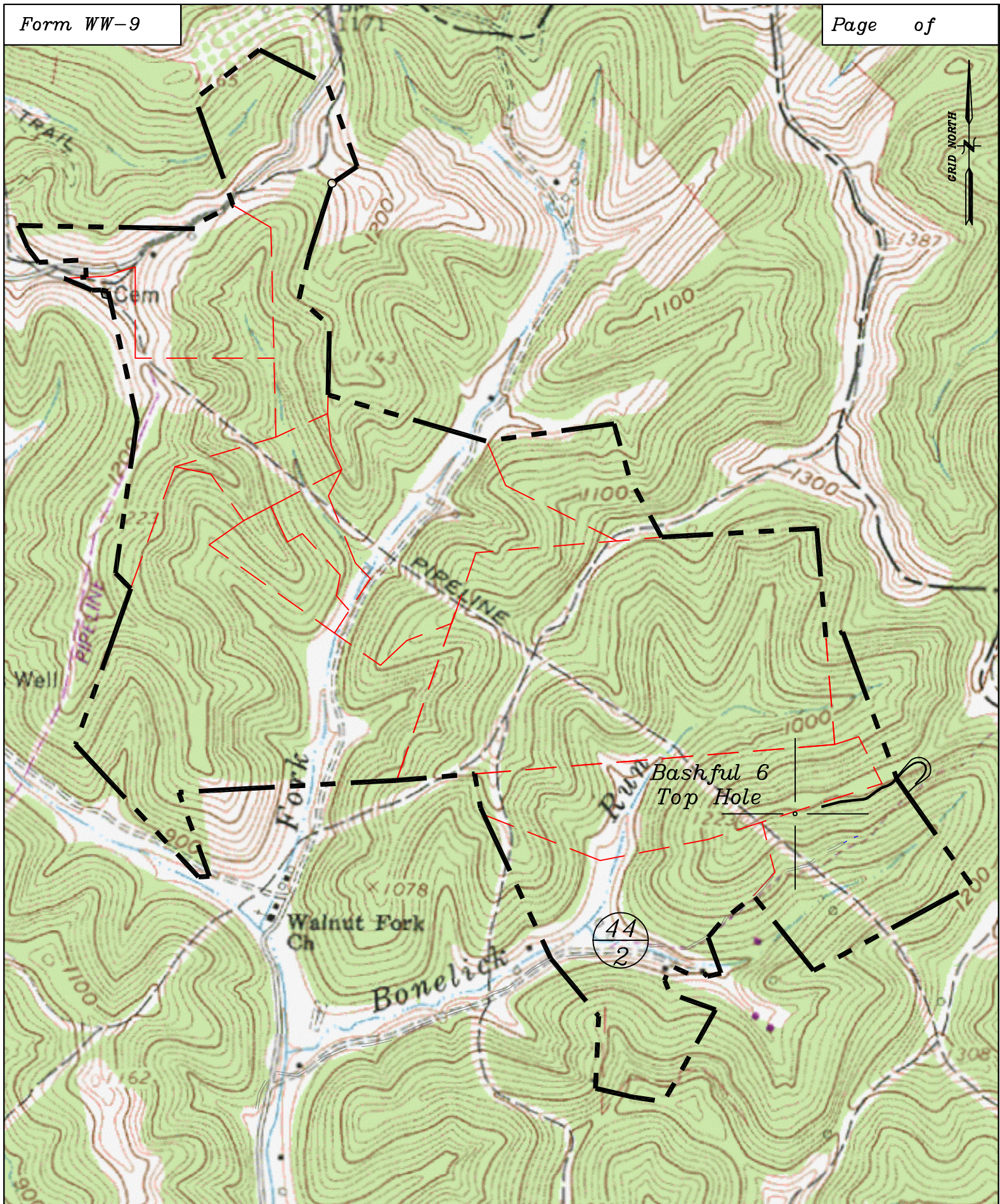
### Multi-site impoundment

Source ID:	31653	Source Name	W701 Fresh Water Centralized Impoundment		Source start date:	3/1/2014
					Source end date:	3/1/2015
Source Lat:	39.438678	Source Long:	-80.720864	County	Tyler	
Max. Daily Purchase (gal)				Total Volume from Source (gal):	7,854,000	
DEP Comments:	095-FWC-00001					

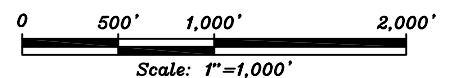
The intake identified above has been defined in a previous water management plan. The thresholds established in that plan govern this water management plan unless otherwise noted.

Reference: WMP-577



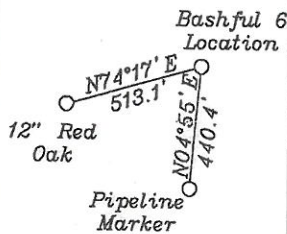


Well: Bashful 6  
Quad: Center Point 7 1/2'  
District: McElroy  
County: Tyler





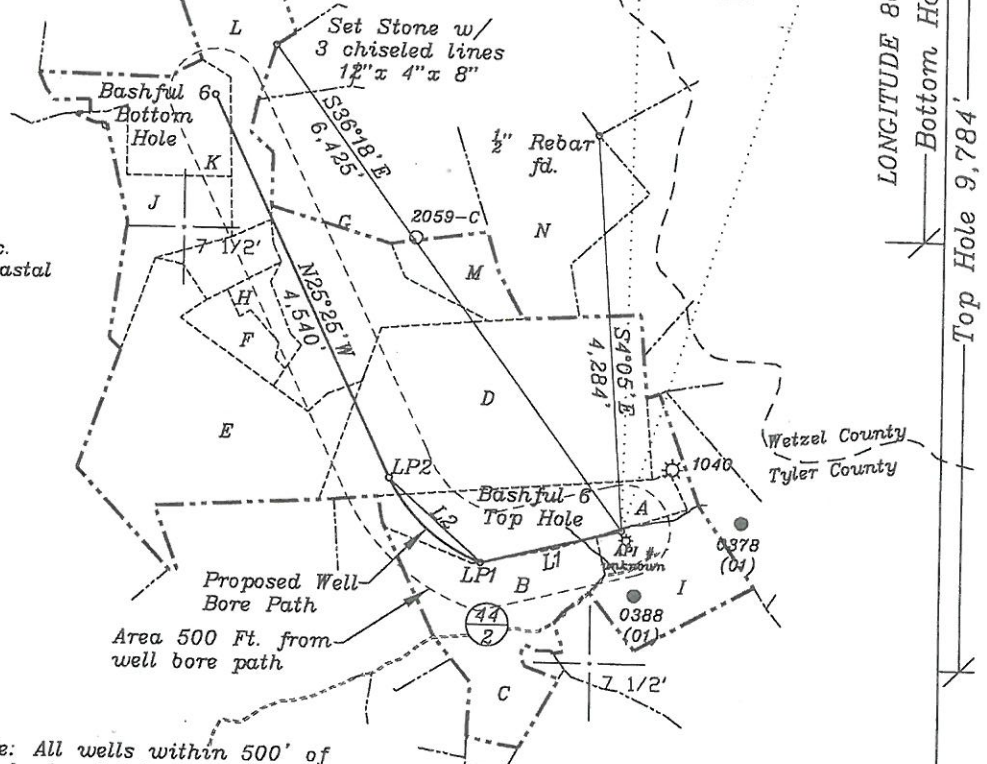
## References



- A- Eli Tippins TM 7/11 45.25 Ac.  
 B- Thomas TM 7/12 43.32 Ac.  
 C- Thomas TM 7/31 18.14 Ac.  
 D- Schumacher TM 3/25 134 Ac.  
 E- Weimer TM 3-23 102 Ac.  
 F- Weimer TM 3-24 13.05 Ac.  
 G- Larson & Fleck TM 3/17 50.38 Ac.  
 H- Coastal Forest Resources Co. & Coastal Timberlands Co. TM 3-18 12.95 Ac.  
 I- Tippens & Thomas Headley Est. TM 7-13 45.25 Ac.  
 J- Bowser TM 3-5 35.4 Ac.  
 K- Eidle TM 3-6 35.16 Ac.  
 L- Haessly Land & Timber LLC TM 3/7 40.8 Ac.  
 M- Schumacher TM 3/16 18 Ac.  
 N- Kowalski TM 3-14 68.68 Ac.

LATITUDE 39-30-00 N  
 Notes: Ties to wells and corners are based on State Plane Grid North-WV North Zone NAD 27.

Top Hole 3,788'  
 Bottom Hole 8,251'



Note: All wells within 500' of the horizontal leg are shown on this plat based upon information taken from DEP mapping, well plats & aerial photos.  
 No water wells were found 250' of the location. No dwellings or agricultural buildings were found within 625' of the center of the well pad.

L1- S76°06'W 1560'  
 L2- N48°00'W 1346'

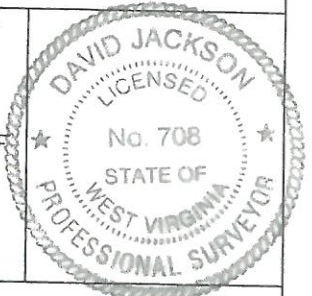
Top Hole  
 NAD 27-39.472999 N, 80.721284 W  
 UTM NAD 83 (Meters)-4369314.0 N, 523988.1 E  
 State Plane NAD 27-356729.5 N, 1655246.4 E  
 Landing Point-1  
 NAD 27-39.471914 N, 80.726630 W  
 UTM NAD 83 (Meters)-4369192.2 N, 523528.6 E  
 State Plane NAD 27-356355 N, 1653732 E  
 Landing Point-2  
 NAD 27-39.474349 N, 80.730217 W  
 UTM NAD 83 (Meters)-4369461.5 N, 523219.2 E  
 State Plane NAD 27-357256 N, 1652732 E  
 Bottom Hole  
 NAD 27-39.485532 N, 80.737320 W  
 UTM NAD 83 (Meters)-4370700.8 N, 522604.7 E  
 State Plane NAD 27-361356 N, 1650783 E

(+) DENOTES LOCATION OF WELL ON UNITED STATES TOPOGRAPHIC MAPS

FILE NO. \_\_\_\_\_  
 DRAWING NO. 1  
 SCALE 1" = 2000'  
 MINIMUM DEGREE OF ACCURACY 1 in 200  
 PROVEN SOURCE OF ELEVATION GPS  
submeter unit

I THE UNDERSIGNED, HEREBY CERTIFY THAT THIS PLAT IS CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF AND SHOWS ALL THE INFORMATION REQUIRED BY LAW AND THE RULES ISSUED AND PRESCRIBED BY THE DEPARTMENT OF ENVIRONMENTAL PROTECTION.

(SIGNED) David L. Jackson  
 R.P.E. \_\_\_\_\_ L.L.S. 708



STATE OF WEST VIRGINIA  
 Division of Environmental Protection  
 OFFICE OF OIL AND GAS

DATE October 9, 2013  
 OPERATOR'S WELL NO. Bashful 6  
 API WELL NO. \_\_\_\_\_

WELL TYPE: OIL GAS LIQUID INJECTION WASTE DISPOSAL 47 095 02133 H6A  
 (IF 'GAS') PRODUCTION X STORAGE DEEP SHALLOW STATE COUNTY PERMIT

LOCATION: ELEVATION 1201.9' WATER SHED Bonelick Run  
 DISTRICT McElroy COUNTY Tyler Co.  
 QUADRANGLE Center Point 7 1/2'

SURFACE OWNER Rodney L. & Vickie L. Tippins & Thomas Headley Est. ACREAGE 45.25 ac.  
 OIL & GAS ROYALTY OWNER South Penn Oil Company LEASE ACREAGE 45.25 ac.  
 LEASE NO. T3024 45.25 ac., T3031 45.25 ac., T3033 83.47 ac., T3036 115.05 ac.,  
T3071B 80.725 ac., T3072 68.675 ac., & T6804 60.08625 ac.

PROPOSED WORK: DRILL X CONVERT DRILL DEEPER REDRILL FRACTURE OR  
 STIMULATE X PLUG OFF OLD FORMATION PERFORATE NEW  
 FORMATION X OTHER PHYSICAL CHANGE IN WELL (SPECIFY) \_\_\_\_\_  
 PLUG AND ABANDON CLEAN OUT AND REPLUG

TARGET FORMATION Marcellus ESTIMATED DEPTH TD- 16000' +  
 WELL OPERATOR Jay-Bee Oil & Gas, Inc. DESIGNATED AGENT Randy Broda  
 ADDRESS 1720 Route 22 E, Union, NJ 07083 ADDRESS 3570 Shields Hill Rd., Cairo, WV 26337

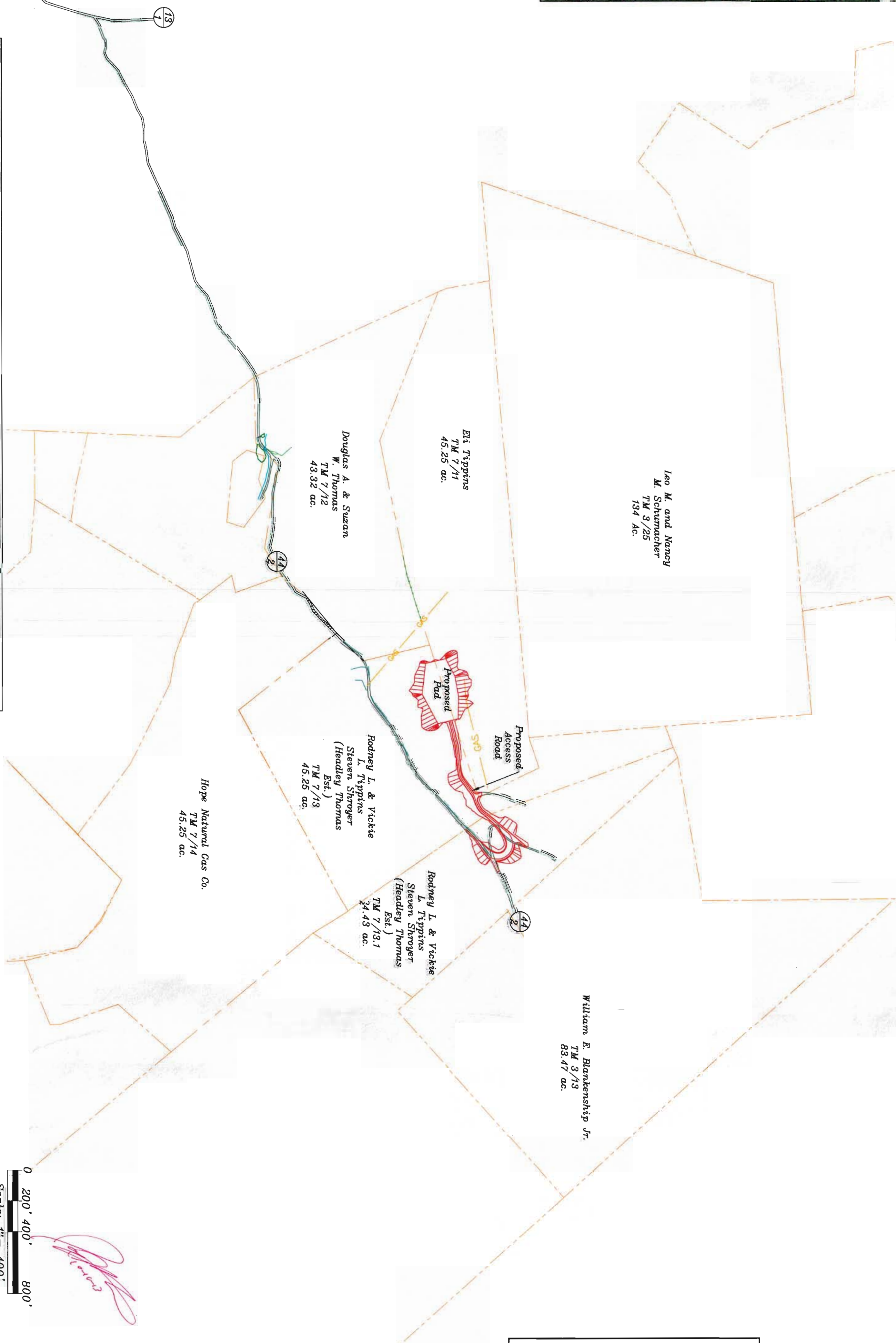
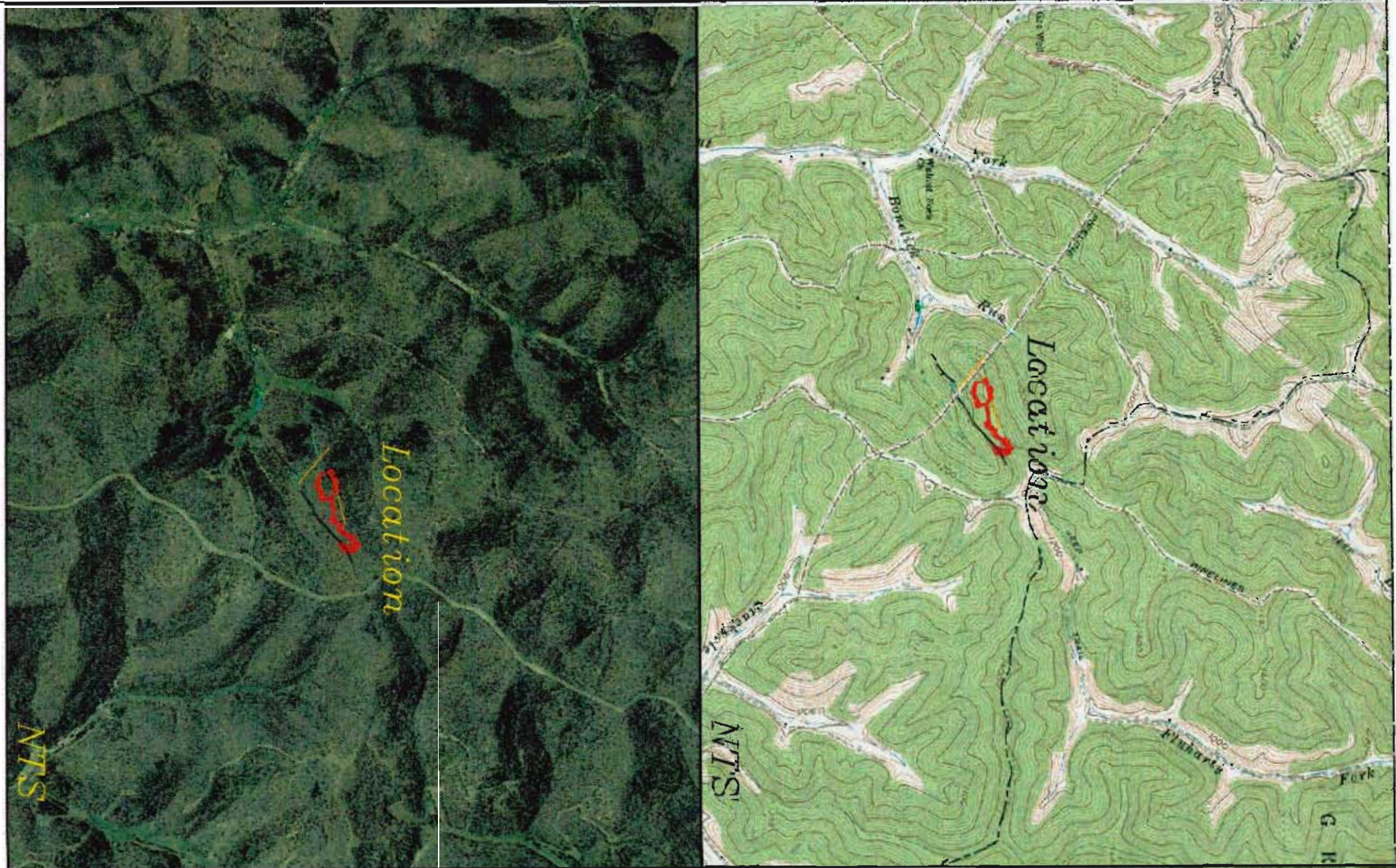


BASHFUL SITE PLAN

McElroy District, Tyler County, WV  
Prepared for JAY BEE OIL & GAS

Date: September 19, 2013

GRID NORTH  
West Virginia  
State Plane  
NAD '83  
North Zone  
RTK GPS



Sheet Description	
1	Cover
2	Details & Notes
3	Details
4	Details
5	Details
6	Existing Contour Plan
7	Proposed Pad Plan
8	Profile & Cross Sections
9	Reclamation Plan
10	Road Plan & Profile
11	Road Cross Sections

CENTER PAD	
Geographic NAD 27	
Latitude: 39.473051	
Longitude: 80.721205	
Geographic NAD 83	
Latitude: 39.473133	
Longitude: 80.721029	
CENTER ROAD INT.	
Geographic NAD 27	
Latitude: 39.473498	
Longitude: 80.718025	
Geographic NAD 83	
Latitude: 39.473580	
Longitude: 80.717849	

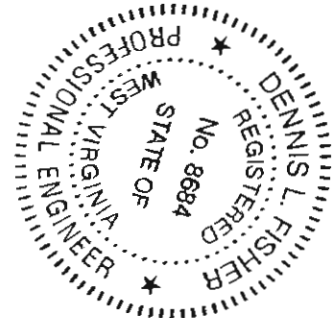


Jackson Surveying Inc.

Cover  
Sheet 1 of 11  
BASHFUL SITE PLAN

Revisions:  
Revised property owner 9-30-2013  
T.M. 7-11

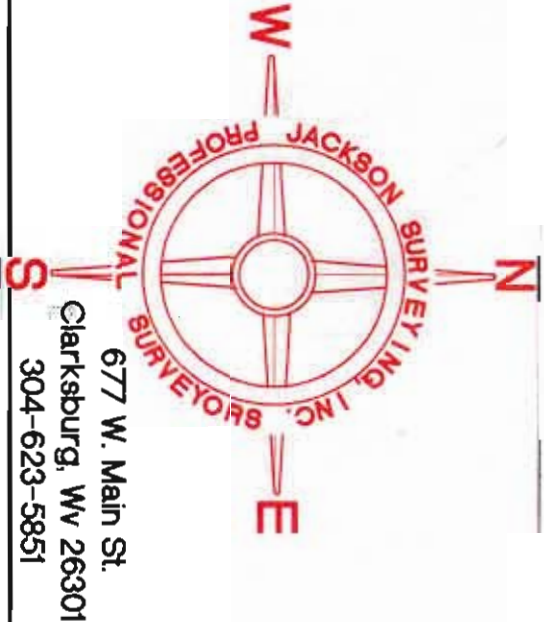
WEST VIRGINIA 811  
CALL BEFORE YOU DIG!  
Dial 811 or 800.245.4848  
www.wv811.com



Design Certification  
The drawings, construction notes and reference diagrams attached hereto have been prepared in accordance with the West Virginia Code of State Rules, Division of Environmental Protection, Office of Oil and Gas.  
The information reflects a gas well drilling pad.

Dennis L. Fisher RPE 8684: *Dennis L. Fisher*  
Date: 10/29/13

DLF.  
Dennis L. Fisher, RPE  
PO Box 281  
Philippi, WV 26416  
Cell: 304-677-4129  
E-Mail: Fisher.Engineering@gmail.com



Cover  
Sheet 1 of 11  
BASHFUL SITE PLAN



LEGEND	
Existing	—
Proposed	—
Ditch	—
Drain	—
LOD	—
Property Line	—
Ex. Natural Gasline	— GAS —
30" Reinforced Silt Fence	—
Slope Drainage Break	—

GRID NORTH

Sta. 7933  
TM 2/44  
45.35 ac  
1120

West Virginia  
State Plane  
NAD 83  
North Zone  
RPK GPS

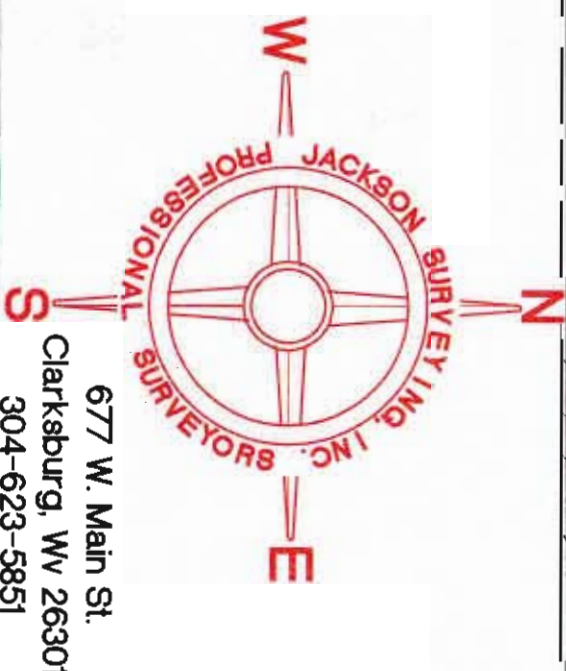
0 15' 30' 60'  
Scale: 1" = 30'

NOTE: ALL DRILL PITS & SUMPS  
SHALL BE LINED WITH HDPE LINER  
HAVING A MINIMUM THICKNESS OF  
60 MILLS.

AREA LIMIT OF DISTURBANCE  
(LOD): 5.0 ACRES

DLF.

Dennis L. Fisher, RPE  
PO Box 281  
Phillippi, WV 26416  
Cell: 304-677-4129  
E-Mail: Fisher.Engineering@gmail.com



Jackson Surveying Inc.

Proposed Pad Plan  
Sheet 7 of 11  
BASHFUL SITE PLAN

